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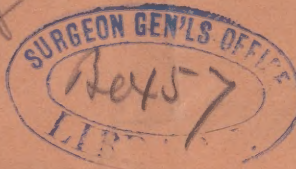
Presented by Dr. D. T. Arledge

RUPTURE
OF
THE PERINÆUM:
ITS CAUSES AND CURE.

BY A. K. GARDNER, M. D.,

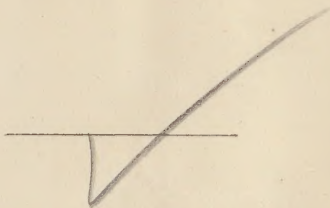
LATE PROFESSOR OF OBSTETRICS AND DISEASES OF FEMALES IN THE NEW YORK MEDICAL COLLEGE.

*Augustus
Kinsley*



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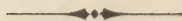
ITS CAUSES AND CURE.



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LATE PROFESSOR OF OBSTETRICS AND DISEASES OF FEMALES IN THE NEW YORK MEDICAL COLLEGE.

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RUPTURE OF THE PERINÆUM: CAUSES AND CURE.

Within a few months, through the kindness of professional friends, I have operated upon five cases of ruptured perinæum—a small number to count, but illimitable to think upon. Some weeks ago, through the attention of the Honorable Senator Anthony, of Rhode Island, I received a "Report of the Columbia Hospital for Women: By J. Harry Thompson, Surgeon-in-Chief." These events are the origin of the present paper.

CAUSES.

Caurchill gives thirteen causes of this disaster. Thompson condenses them into five, as follows:

1. Violent expulsive efforts by the patient, on contact of child's head with the perinæum; in most cases induced by too much manipulation.
2. Unusual width of the child's shoulders, in proportion to the child's head.
3. Extreme width of the perinæum.
4. Inelasticity of the perinæum, occasioned by fatty degeneration of its tissues.
5. Unskillful use of the forceps.

The first case I ever saw, more than twenty-five years ago, was in the person of the young, healthy, robust mistress of one of New York's rich men, pregnant for the first time, and whom I was engaged to attend in her confinement. In good health, and with no signs of immediate labor, she was eating her breakfast in the basement; and when about finished, she experienced a slight pain and a desire to go to the water closet, and accordingly started for that purpose. When half way up the second flight of stairs she was taken with a severe cramp in the abdomen, compelling her to seize upon the banister for support; and standing there and then, her baby was forced from her, the abdominal cord was violently ruptured, the child falling head foremost on to the stair, and "bumpty-bump" it rolled to the floor beneath without injury. The mother was taken to bed, I was sent for, and on delivering the placenta, I found a complete laceration of the perinæum and through the sphincter ani, which I immediately re-united by the usual silk "interrupted stitch" ligatures of those days.

We scientifically know that a candle can be shot through a board; but *momentum* seems to be forgotten in obstetrics. Rupture to any extent rarely occurs in slow delivery. Where the head is moulded by pressure; where it remains long on the perinæum, and the natural delivery is not interfered with, no such event occurs, in my experience. We read of cases where the head has punctured the perinæum, going through it, avoiding both the vaginal and rectal canals. These are the bullet heads, which have gone through, like the candle through the board, by excess of speed! This is the condensation of Nos. 1, 3 and 4 of Thompson's citation of causes.

Churchill's thirteen causes are thus enumerated:

1. Sacrum too perpendicular.
2. Arch of the pubes too acute.
3. Thickened state of the urethra and subjacent parts.
4. The too rapid passage of the head.
5. Exostosis in any part of the pelvic cavity.
6. Excessive breadth of the perinæum.
7. Rigidity of the perinæum.
8. Tissues of the perinæum weakened by disease.
9. Occlusion of the lower outlet of the hymen.
10. Malposition of the child's head.
11. Malformations.
12. Exercise of too much voluntary force by the patient.

13. Want of care when instruments are used.

Now, of these reasons, Nos. 1, 2, 3, 6, 7, 8, 9, 10, 11 and 12, are all causes of and dependent upon cause 4; and as before mentioned, are merely the reasons of the cause No. 4, viz.—*momentum*.

Tyler Smith alludes only to the 7th division—rigidity of the perinæum.

Gaillard Thomas, with far less than his ordinary discrimination, gives four causes: parturition (!), use of forceps, manual delivery, craniotomy. In other words, it comes from having a baby, and any assistance that may be professionally given to her. His causes would have been but a little more complete if he had added to his definitions,

"by injury from railroad accidents, etc., and by want of care at the time of delivery."

Grailly Hewitt simply refers to difficult labor.

Byford gives as causes: straight sacrum, rigidity of the perinæum, large and unusually ossified head, too narrow arch of the pubes, unskillful use of instruments.

Baker Brown suggests as principal causes: "the dimension of the child's head being too large, absolutely and relatively, for the capaciousness and expansibility of the natural outlet; an unnatural rigidity of the perineal tissues, or extreme width of the same; unskillful use of instruments; parturition for the first time at a very early or late age."

Dr. Fordyce Barker, in his recently issued, beautiful and valuable work, says:

1. Certain anatomical configurations of the natural organs, as (a) very straight sacrum; (b) the direction of the vulval opening; (c) natural elasticity and distensibility of the perinæum; (d) extreme smallness of the vulva.

2. Excessive size of the head and shoulders, absolute or relative.

3. Peculiarities in the mechanism of labor: (a) when the occiput rotates into the hollow of the sacrum; (b) face presentations; (c) incomplete flexion; (d) excessive flexion.

4. The physiological character of the labor: (a) when too rapid; (b) when too tedious, the perinæum becoming hot and congested; (c) excessive nervous irritability.

5. Unskillful or careless manual or instrumental delivery.

Of all these writers, Baker Brown and Barker seem to me to be alone practical observers, and analyzing and acute thinkers on this subject.

Dr. Thompson's opinions are apparently those of an operator. He writes me on this point: "You must recollect, my dear Doctor, that all, or nearly all my cases, come to me months or years after injury has occurred." They are formed from a deduction from the reports that came with the cases upon which he has operated, and not from his actual observation of the causes of these accidents. The errors of his statements are not errors of his own, but are incident to all deductions from statistics.

We all know the feelings of the accoucheur to whom this grave accident has happened. We all know the envies and jealousies of the profession. We know how the former desires to screen himself, and how easy it is to say, "rigid perinæum," "deviations in the bony structure," "head too unyielding, large, etc.," "too old, or too young a mother;" and better still, how easy to attribute this sad result to unskillfulness of the (former) attending physician—especially if of another "school,"—to "want of care when instruments were used." He writes me, February 21st: "I shall operate to-day upon my 117th case of resto-

ration of the perinæum,—so far without a single failure."

Dr. Thompson analyzes fifty-three cases which have come under his care—for operations, remember, and not of cases where the accident occurred under his immediate observation, a very great difference, as before alluded to—and yet note his deductions, for they are exceedingly valuable in this relation. "Thirty-three were of long standing, *i. e.* ranging from one to seventeen years, and their histories, obtained principally from the patient, are *not altogether reliable*. Twenty were recent cases. In fifty-four instances the accident occurred at the birth of the first child; the remaining nine were multiparæ. In two of the multiparæ, instruments were used, as also in sixteen of the primiparæ. In no case could I discover any abnormal acuteness of the arch of the pubes, and in two only was the sacrum unusually straight. Two had been head presentations, and eleven were extremely rapid labors, accompanied by violent expulsive pains, the patients stating in three cases that they felt the tissues tear, calling the attention of the attending physician to the circumstance."

With this *resumé* of the opinions of leading writers on this subject, I am prepared to present *my series of causes* of this most serious of obstetric accidents.

1. Momentum of child after passing "through the bones."

2. The disproportionate enlarged size of the head of the child to the lower strait of the pelvis.

3. Undistensable cicatrizes of the perinæum from previous injuries (often in childhood); or ulcerations (often syphilitic).

4. Unusual position of the external genital organs creating an abnormal perinæum.

5. Results of instrumental delivery, and not necessarily or generally unskillful, and often simply caused by momentum.

6. The sudden expulsion of the child's shoulders.

Reconsideration.—1. All treatises on obstetrics advise support to the perinæum by the accoucher's hand when the head is passing through the external soft tissues, so, as far as possible, to supplement the too straight sacrum by the curved palm; and how many of us have practically felt the strained perinæum under our hand, and we have urged upon our patient to refrain from all voluntary expulsive efforts. But the jaded uterus, with a sudden burst of nervous energy—like a fagged horse near to home, that takes the bit between its teeth, and spite of all attempts at restraint, rushes impetuously to finish its journey—defies all our efforts and the mother's uncertain will, and we feel the leathery band under our very fingers, despite our most energetic efforts to hold back the head, yield, crack and tear, with a seemingly unending continuation. This rupture was

caused simply from the want of sufficient time for dilatation. This, the commonest of the causes of perineal rupture, embracing more than all the others combined, is one for which the accoucheur is little to be blamed. Of course, had he suspected such an eruption of nervous energy, he might have quieted it by some treatment, as *op. m.*, or better, *chloroform*. *Ergot* is sometimes a cause of this, when given improperly, the os uteri being imperfectly dilated, the sudden yielding of which is followed by a too rapid descent of the child.

2. We occasionally have so large a head, a body, shoulders, and even hips, that they, one or all by turns, fill up the entire bony canal, and the entire space, stript of even the tissues, is absolutely requisite to allow it to pass; and then we see, not only the perinæum torn through, but the posterior portion of the rectum and the subjacent tissue severed, nay, down to the coccygeal extremity—occurring too, with little or no increased momentum. Where such cases are allowed to drag their slow length along, the pressure causes vesico, and recto-vaginal fistules. When hastened by instrumental assistance, the same result not unfrequently occurs from abrasion and tearing away.

3. This cause needs no prolonged explanation.

4. The various positions of the pudendum is note-worthy to accoucheurs. Barker calls them "the direction of the vulval opening," as if there were not any bony change accompanying and calling for the vulval deviation. Dr. Barker says: "In some, the ostium vaginae is nearly parallel with the plane of the trunk, while in others it is nearly at right angles with this plane; or to put the statement in other words, in some the direction of the vaginal canal is nearly parallel with the axis of the pelvic cavity, while in others it more nearly corresponds with the axis of the outlet." I have had cases where the vulva was not between the legs, but could be seen when standing perfectly erect, and a speculum easily then introduced—an occurrence which could not take place did not the pubic bones arch upward and take an unusual position. The position of the vulva is in fact as various as the location of the mouth,—which is sometimes in the middle of the face, and sometimes at the lowest portion, with scarcely a perceptible chin below it. When the vaginal opening is far anteriorly and the rectum far posteriorly, a large perinæum is the result, and the axis of the lower strait would centre at its middle, the result of which is to make the head to present upon it, and not anteriorly to it. To overcome this, the attending physician should strive to restrain the "final pains," and by proper manipulation distend and slide the perinæum over the child's head, to prevent the imminent rupture.

5. The phrase, "unskillful use of instruments", is very commonly employed by the wri-

ters above quoted, and is a sweeping phrase, more denunciatory than true. The result of instrumental delivery, usually by forceps, comes as in cause 1, that I have given, namely—from momentum. The head is forcibly dragged through the canal before the perinæum has had time to dilate, as above explained. It is generally supposed that the edge of the forceps cuts through the perinæum, which is almost impossible, as it would be very difficult to get the forceps on to the head so as to bring the edge thus in contact with these soft tissues.

Of late years the forceps practice is very different from that of a quarter century ago. They are generally more often applied when the head is on the superior strait that when resting on the perinæum. Most generally, when I deliver by the forceps, after having brought the head down so as to present at the vulva, I remove the instrument—sometimes but one blade—and allow the labor to be completed by the natural efforts, thus giving time for the perinæum to fully dilate under a comparatively natural pressure. I have rarely, if ever, had a rupture thus occurring.

6. In an instance or two I have seen, after the head was expelled, a sudden spasm of the perineal muscles, contracting it around the neck of the child; and a sudden forcible uterine contraction (aided too often by the accoucheur's traction on the head) has resulted in a cutting through of the perinæum by the sharp projection of the inferior shoulder. I will not say that there may not sometimes be, as Dr. Thomas claims, "an unusual width of the child's shoulders in proportion to the child's head," but I do say the circumference of the shoulders almost always is smaller than the largest circumference of the head; and more than this, that the *unyielding* long diameter of the shoulders is smaller than that of the head; for the shoulders can almost be doubled upon themselves—sometimes, it is true, by the breaking of a clavicle.

"Fatty degeneration" is one of the sounding platitudes of the day. It is applied everywhere and to everything, and is one of the proofs that can be brought to maintain the apothegm, "that language was created to hide the want of ideas." Thompson says it occurs most frequently after thirty years of age. If there be such degeneration of the sphincter vaginae and sphincter ani muscles (which compose the perinæum), there is also general fatty muscular degeneration, in consequence, of the uterus and abdominal muscles engaged in the expulsion of the child. The result would be muscular inertia and inability; while the fact is, that rupture of the perinæum is caused by an excessive vigor and a too great muscular energy. Barker calls this condition "adipose tissue in the structure," and says, "where there is considerable, there is sure to be an unyielding perinæum." My experience is quite the contrary;

for if the child is not hurried along too rapidly when at this stage, I find the perinæum gives without difficulty. On the other hand, I have found the perinæum of acrobats, opera danseuses, and those in the habit of freely moving their legs, so as to put the perinæum on the stretch, to materially add to its suppleness. Did any one ever hear of an uncivilized Indian woman with a ruptured perinæum?

EXTENT OF PERINEAL RUPTURE.

Few primiparæ occur without a greater or less laceration of the fourchette—an injury which may seem to be of very considerable extent when occurring in a largely extended and thin tissue, but which after a day or two's contraction scarcely shows a scratch.

Barker says: "There is no doubt that the anterior border of the perinæum or fourchette is generally lacerated in primiparæ. The late Dr. Williams, of Manhattanville, who was obstetric physician to the Emigrant Hospital, Ward's Island, said that a visual examination would show that in first labor, the mucous fold called the fourchette was always lacerated; and to satisfy myself on this point, I went with him to Ward's Island on three different occasions. We carefully inspected these parts in sixty-two primiparæ, and I must say that in every one this mucous fold was found torn; but in thirty-seven there was no laceration of the other tissues of the perinæum." I suppose the truth is, that rupture of the fourchette is about as common as rupture of the hymen. I have seen pregnant women with unruptured hymens, and have delivered primiparæ without a trace of injury to the fourchette. In

one case carefully examined, not only was the fourchette intact, but I delivered the after-birth, and not a solitary drop of blood, or a bloody smear or discoloration of any sort followed it. Indeed, a white cloth might have been carefully passed over the inside of the placenta without being colored, for a slight film carefully enveloped its inner surface. By careful cutting of the cord, not a solitary spot soiled the bed clothes, the child, or any surroundings. [While revising this article I have attended a lady of 35, with her first child. She, less than five feet in height, and the child weighing over eight pounds, and the fourchette was not abraded].

2. It may be continued any distance, till it is entirely disjuncted—up to the rectum itself.

3. It may pass into the rectum, dividing the recto-vaginal septum for several inches upwards.

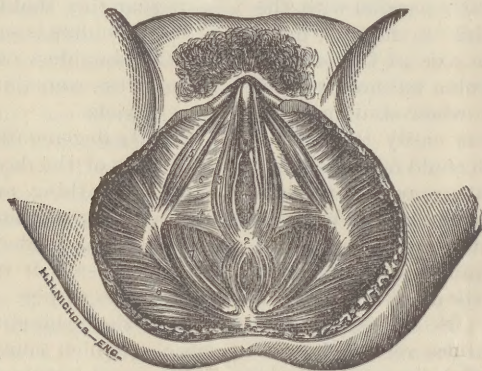
4. In addition to this, it may pass through and sever the posterior wall of the rectum, up to the hard portion of the os coccygis.

TREATMENT.

1. The slight lacerations of the fourchette generally occur in the raphe, but sometimes double lacerations are noted on either side of the median line, and running through the labia. Little is required to be done for these cases, beyond the ordinary cleanliness, and a wash of weak *chloride of soda* or *carbolic acid*.

2. If the rent, however, is more extensive, two questions are to be answered: "Is it so severe as to necessitate an operation?" "Is that operation to be done now, or at some weeks or months time afterward?"

Fig. 1.



1. Sphincter ani muscle.
2. Perineal center, with inter-crossing of the sphincter ani and sphincter vaginae muscles.
3. Sphincter vaginae muscle.
4. Transversus perinei muscle of the female.
5. Erector clitoridis muscle.

IS AN OPERATION NECESSARY?

Before answering this question, let us carefully look at the anatomy of the parts. We are apt

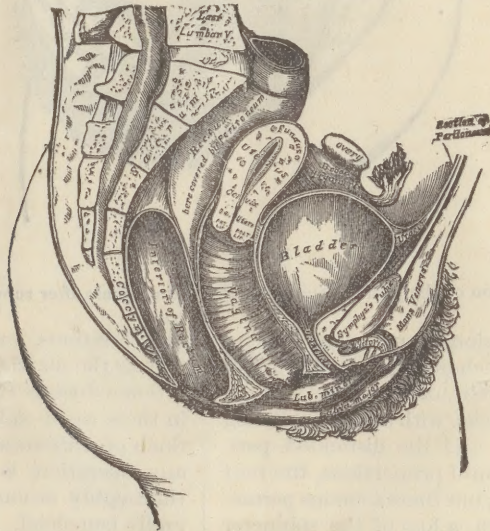
to get our remembrances of the male and female perinæum somewhat jumbled.

Figure 1, here presented, will serve to show the

muscular formation which now especially concerns us in the present inquiry. Figure 2 will show the normal position of the organs, and a comparison with Figure 1 shows the result of a perineal laceration—which, however, does not invade the rectum or recto-vaginal septum. The result of this complete rupture is a contraction of the sphincter ani from its posterior insertion on either side of the coccyx, drawing the anterior wall backward; and the fibres of the sphincter vagina, being thus torn from their attachment posteriorly, lose all power of drawing the posterior wall of the vagina forward and upward; the transversalis perinei draws the lacerated edges outward and upward, widening the gap made antero-posteriorly; and the vagina, which normally is a

closed canal, so firmly contracting as to become an evident support for the superimposed organs, becomes a mere chasm, and the floor of the pelvis is lost. In addition to this, the posterior wall of the vagina becomes straightened, and the tissues being relaxed, permit of the formation of a pouch at the lower portion, immediately above the internal sphincter, in which the forces accumulate, and vaginal recticæ soon follows, drawing in the posterior *cul-de-sac* of the vagina, and changing the axis of the uterus, which now hangs perpendicularly over the external outlet. All support being lost, it descends, drawing with it the anterior wall of the vagina and bladder. A *cul-de-sac* of the bladder is soon formed, in which the urine is retained, and the bladder can only be com-

Fig. 2.



Relative position of the genito-urinary organs of the female. (Normal.)

pletely emptied by the patient introducing her finger into the vagina, and temporarily replacing the uterus.

To answer this question, we must recognize what the effect of the injury actually is to the patient. Thompson briefly and well describes it.

The consequences of this accident are extremely grave, and in many cases of long standing incapacitate the patient for any exertion in the erect position. "The principal sequelæ are: prolapsus of the posterior wall of the vagina and anterior wall of the rectum, or 'vaginal rectocele;' prolapsus of the anterior wall of the vagina and posterior wall of the bladder, or 'vaginal vesicocele;' procedentia of the uterus, with all the complications attending each of these conditions."

Where the rupture destroys the sphincter ani, there is *ex necessitate rei* an absence of all control over the bowels. In persons of a constipated

habit, it may sometimes occur that a semi-daily attention may prevent the continuous escape of the fæces; but even in these cases, any lifting, extraordinary exercise, and straining, is followed by an escape of the fæcal matter; while in all cases where flatulence is present, or a condition of diarrhœa, the patient is made not only personally uncomfortable, but very offensive to those around.

"These are not *supposed* results of the accident, but necessary *consequences*, as we can readily comprehend when we examine the female perinæum and maternal outlet, and the relative anatomy of the genito-urinary organs."

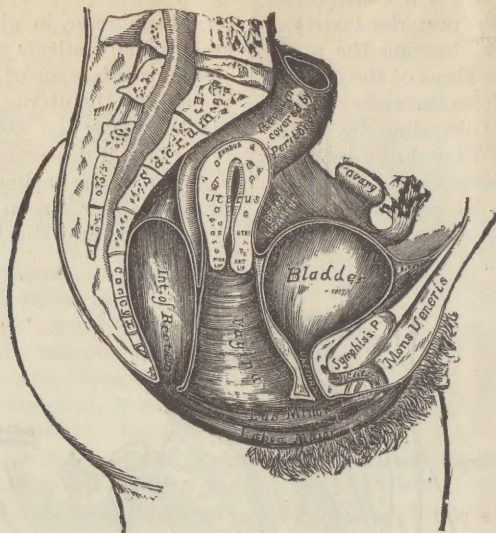
It is not in view of these aggravated cases that we ask "if an operation is necessary"? Any pain or risk is gladly endured, with a prospect of relief; and fortunately it is generally quite safely, and easily, and surely obtained.

In cases of trivial ruptures of the fourchette,

it is quite ordinary to leave them to themselves; and it is generally supposed that the surfaces unite—a reality which I think is rarely thoroughly accomplished. Instead of this occurring, as is supposed, the patient often not being in-

formed of any such accident, frequently does not take that care of herself, so as to keep the parts in apposition, and thus to enable nature to do it best. But even if the knees are kept tied together, the perpetually flowing lochia, with con-

Fig.



Relative position of the genito-urinary organs of the female after rupture of the perinæum.

comitant clots and occasionally urine, are passing over the surface, and mechanically prevent union by the first intention. Granulation and cicatrization sooner or later occur, with some shortening consequent thereupon, and the distended perinæum assuming its natural proportions, the rent is almost imperceptible; but there remains permanently an enlarged vulva, a loss of the sphincter vagina, precluding erythimal contractions, a dependant vaginal laxity, quite unnatural and very unsatisfactory to the husband in his ama-

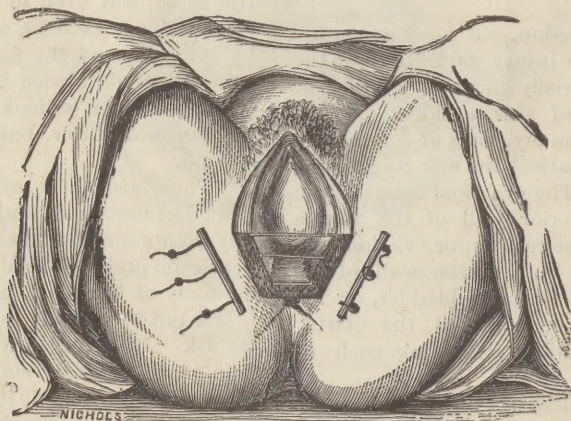
tory relations, and one very commonly seen among the married women all over the world.

Some doctors (business men?) "take a stitch" in these cases—a superficial one, with simple silk. Such operations are useless, to say the least. If any operation is demanded, it should be one thoroughly accomplishing its purpose, and thus really beneficial.

WHEN SHOULD THIS OPERATION BE DONE?

This is a very important query. At first blush we would naturally say: "Now. The injury has

Fig. 2.



Position of suture and quills before coaptation of the denuded surfaces.

just been effected, and now it is easier repaired; now the parts are freshly severed; hereafter they will be cicatrized and a unification will be requisite, and the length and difficulty of the operation thus greatly magnified."

On the other hand, we must consider the condition of the patient, exhausted by protracted labor, the effect both on body and mind by the additional tax upon her energies. The question, too, comes up, whether her position is such that a proper operation can be done. Is she in a dark garret, in squalor? But apart from these questions comes a consideration of season: Is it one of general puerperal disease? Whether she can have the proper nursing—one very essential element of which is, capacity of the nurse to use a catheter.

But the question principally to be considered, is the chances of a successful result to the operation. We must remember that the locheal flow is incessant, interfering not a little with the operation, rendering the successful closure of the wound almost impossible, without retaining within it coagulations and fluids which will putrify, which cannot escape, and which, even if not added to by subsequent discharges, interfere with a union by first intention.

Next, the condition of the parts themselves, independent of the tear, is to be considered. Are they œdematous, ecchymosed, injured by prolonged friction, or pressure of the child, or the operator? These interfere greatly with the chances of success.

If none of these objections occur, the reasons for the operation preponderate. *First*—The operation takes half the time it would if it is necessary to vivify the surface. *Second*—There is no unnecessary waste of substance—sometimes an item where the perinæum is contracted. *Third*—Anæsthetics overcome utterly the mental anxieties and fatigues of the tired sufferer, and the operation really results in a relief, and perhaps a substitute for an anodyne. *Fourth*—The after confinement and quiet in bed, is the same time that is now necessarily spent in the confinement. *Fifth*—If the operation is really done as a serious operation is done—no nonsense of "taking a stitch"—the operation is not a superficial one; but the parts are closely drawn together, firmly held, so that no stitches will cut through, so that no lochial discharges will penetrate through the wound.

The operation should then, if possible, be done immediately—there is no hurry for hours; but before any reparatory attempts of Nature have been instituted—any cicatrization or ulceration of the surface. In order to avoid moving the patient, I have sometimes operated when she laid upon her side in the bed, but I do not mean again to do so. The injury consequent upon being placed upon a table is imaginary, while the advantages of being exposed to a good light even

with the eye, in the best possible position upon the back, are too obvious to be renounced. The main objection comes from the attending physician, who thinks that this makes a parade—that it magnifies the injury for which he is fearful that he may be blamed. It is not a dangerous or difficult operation, but it is one requiring delicate manipulation, some experience, and to know how to do it. It cannot be well performed bending over a bed, till cramped in every limb, in one's own light, and generally awkwardly placed.

STEPS OF THE OPERATION.

In preparing the patient, the nurse should give the patient some oil the evening before, and follow it by an injection of simple water on the morning itself. She should be instructed to cut away all circumjacent hair which may interfere with the operation, or become afterward entangled in the appliances.

In chronic cases the labia and perinæum should be carefully shaven; but although even more necessary for subsequent cleanliness in these earlier operations, it is not so easily done. Much, however, may be effected with a sweep or two of a sharp bistoury prior to commencing the operation. When this is effected, and the patient is in situ, with the limbs well drawn up, so as to remove all tension on the parts, a careful survey is of the first importance—the character and extent of the injury should then be fully understood, and the exact operation speedily planned. The number and location of every stitch should then be fixed, at least in the mind of the operator; and it is well for some, if nervous or not familiar, to mark the spots for the entrance and exit of the needle with a soft pencil or ink. If there is to be any stitches put into the recto-vaginal septum, these require to be first done before closing the perinæum. If possible, these should be avoided, from the difficulty of their subsequent removal.

I have already said that sutures with silk are indispensable, as I presume that to-day no physician would ever dream of using anything but silver wire. I should also have said that "interrupted sutures" were also inadmissible; but the great apostle of vaginal surgery, Dr. J. Marion Sims, told me but a few days ago, that he never operated any other way; and so likewise Dr. Emmet, I understand. I don't doubt it. Dr. Sims, with a needle and a bit of silver wire, can do anything; but I can't; and I don't believe but what in anybody else's patients they will cut out before the parts become united. Perhaps, in his hospitals, with his skilled nurses, and under his God-inspired eye, he may have success such as I never could get with the liberties and exigencies of home, with ordinary monthly nurses and my bungling ways! All I say here is, "God bless Dr. Sims for all he has done in these localities!"—but my legs are not long enough to step in his every track.

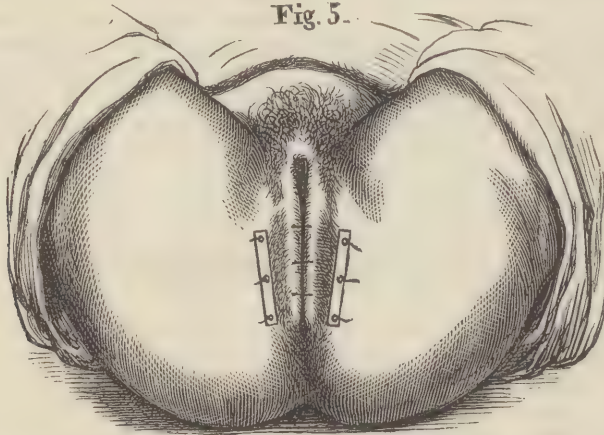
My aim is to perfectly coapt the parts, bring the edges firmly together, so tight that no fluids can pass between them, without any local pressure, and with the necessary pressure *not made upon any one spot* even for a moment, but spread over the whole extent of the surface, both in length and breadth. With the broad clamps I use, and at the distance I place them from the edges of the wound, the wires are kept in a direct line at right angles, spread over the whole extent, and thus the holes made by the needle are really no larger when the sutures are removed than when they were entered. Dr. Sims, in his earlier writings, speaks of his clamps, which he then used, being buried in the tumefied tissue. My desire is to make these clamps so broad that they cannot bury themselves, and so spread the forces as widely as possible. In this respect I differ from Dr. Thompson, who uses round tubes of India rubber, because they are stiff, "not yielding at the parts between the sutures, and because they sink into the tumefied tissue." The clamps I use are of lead, as originally proposed by Dr. Sims. With this exception, the operation I perform is that of Baker Brown, as modified by Van Buren, and is the same used by Dr. Thompson. His description, mainly, I condense here, and illustrate it by electrotypes, many taken from his above-mentioned work, and furnished me by his courtesy.

OPERATION.

It might seem as if there were two operations, dependent upon the fact of the more or less recent character of the wound, but practically, the one embraces the other. In the fresh wound there is to be necessarily no "freshening" of the surfaces to be united; in the old and cicatrized parts there is usually required but little paring off of ragged edges.

The patient being fully ætherized, should be placed upon a firm table of a height convenient for the operator when sitting, the buttocks brought near the edge, and the limbs bent—like as in the well-known lithotomy position—and held firmly by assistants. [The assistants required are one for each limb thus held, one to administer chloroform, one to attend to instruments, sponges, etc., and one as special aid to the operator. No prudent man will voluntarily undertake an operation without such assistance, added to the nurses usually attendant. I have already given the reasons why the operators in such cases are overruled by the attending physicians in regard to these operations in acute cases; and this, too, is one of the reasons why the success in family practice is not as assured as it is in hospitals]. Remove all the hair from the parts as may be possible, and with a small, sharp-pointed scalpel, make the outline of the part to be denuded, allowing for the necessary contraction of cicatrization, rather by

Fig. 5.



removing too much than too little; but the portion removed should never be less than three-quarters of an inch from within outward, and this width of abrasion should extend upward as far, or even a half inch farther than the original location of the fourchette, which may be easily recognized by the different character of the rugæ of the mucous lining of the vagina.

It is very important that this denudation be perfectly done, as any point of membrane left within the closed wound would not only fail to unite by the "first intention" sought, but would be a receptacle for effused blood or pus, and a source of

irritation and disease sufficient, perhaps, to prevent the success of the operation. The removal of the membrane in an entire piece is, therefore, to be sought. The severance usually is best effected with a knife, but some operators prefer sharp-pointed scissors. Dr. Emmet greatly prefers the latter instrument.

The insertion of the sutures is the next step. Select a needle, not too long to be easily manipulated within the vagina, and arm it with double silk, so that when drawn through, a loop remains at the point of entry. Insert the needle an inch or an inch and a half from the external edge of

the wound, and press it directly backward for half an inch or more, before you turn the point toward the vagina, or inner edge of the wound, at which part it is to be brought out; enter it again on the opposite side on the inner edge, and make it traverse the same direction to the external point of exit. [A great error is frequently committed by not making this stitch pass sufficiently deep, so as to control the parts; and it should be remembered a subsequent intermediate row of cutaneous stitches will coapt the external parts.—Which may be seen in Figure 5]. Select a piece of silver wire of medium size, about ten inches long, bend the end over and hook it on to the loop of silk aforesaid, draw the silk gently through, and the wires will follow without kinking. Three or four sutures are generally sufficient—the first to be entered at the bottom of the wound, so as to control the parts around the anus. The principal care, therefore, is to pass the needle so that the external points on either

side, as well as the internal points, should be exactly corresponding, and the wire when inserted be parallel. The only difficulty is in manipulating the curved needle; but this will be found almost none at all when seized with the instrument—[a representation (Fig. 6) is here furnished, by the kindness of the makers, Tiemann & Co., N. Y.],—whose prehensile properties are as wonderful as they are satisfactory to the operator.

The wires being thus in position, are to be passed through clamps upon either side. [These clamps should have been previously prepared, by making strips of lead a half inch or more in width, of a thickness so as to be easily bent, and perforated in pairs, with corresponding holes large enough to easily admit the suture wire. A set of clamps should then be cut off of the desired length]. A perforated buckshot should then be passed over the wires of the left side, and fastened securely by compressing it with strong forceps.

There are some cases where from the conformity

Fig. 6.



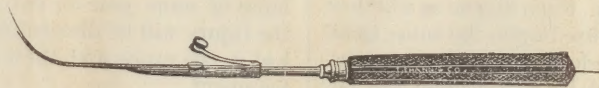
Sands' Needle Holder.

of the parts, and the thinness of the tissue, I have been able to use a "silver wire propelling needle." It is a hollow needle, (Fig. 7) the wire passing through the handle to the point, and in some cases is of great service, as both sides may be perforated, and the wire passed through by a single operation, and with no troublesome silk, etc. In the im-

proved instrument a wheel is placed in the handle, which impinges on the wire, and rolled by the thumb, pushes the wire either forward or backward, as desired, and the needle then withdrawn leaves the wire in its proper place.

Bleeding having ceased, the cut surfaces are to be carefully cleansed, and the parts coaptated by

Fig. 7.



drawing first on the central wire, an assistant gently pressing the soft parts together. In the tension made, the aim is to bring the parts closely together, recognizing that there will be some subsequent inflammatory swelling.

This being attained, slip the shot down to the clamp, and compress it as before. Then the upper suture; and finally passing the finger into the rectum, to ensure a perfect coaptation, finish by securely clamping this. The shot being finally and certainly firmly compressed upon the wires, the wires must be cut off as short as possible, leaving enough to bend over, the more safely to secure the clamp. The gapings of the superficial edges may then be brought together by interrupted sutures, either fine wire or silk. The condition of the parts in the perfected operation may be observed by reference to the cut (Fig. 5), which

well contrasts the appearance of Dr. Thompson's tube and the clamps I propose. She should then be carefully removed to her bed, placed on her side, her knees tied together, and cold water dressings applied for the first twenty-four hours, or longer if there be inflammation. The urine should be effectually drawn off at least twice every day, or allowed to drain away by means of Sims' self-retaining catheter.

I have usually removed the deep sutures about the seventh day; but Dr. Thompson says the third day. I presume union is obtained earlier, but I have known the parts thus united by imperfectly organized tissue to be torn away on turning carelessly in the bed, a sudden nervous start, so that I prefer, as these cause no irritation, to allow them to stay longer. The superficial ones may be severed any time when the

object of them seems to be accomplished. For several weeks care is to be taken against any violent exertion that may serve to disrupt the parts, and more than ordinary attention paid to the perinæum in any subsequent confinement.

THE CARE REQUIRED OF THE BOWELS.

I have omitted, in the description of the operation, all reference to the important improvement made to Baker Brown's original operation by my much valued friend, Wm. H. Van Buren, of New York. I have done this in order to place under a single heading the important care which is required of the contiguous organ—the rectum—both before and after operation; and that I might not encumber the simple statement by a discussion of mooted points.

In the early operations for perineal lacerations, the irritability of the rectum, the constant nervous, natural and excited action of the sphincter ani were found to be serious impediments to the success of the operation. Attempts were made to prevent them by opiates, and patients were kept half narcotized for several days by local applications of *opium*, etc., and then often fruitlessly.

Baker Brown conceived the idea, and successfully overcome this action, by making incisions through the sphincter ani; but he made instead two wounds more severe apparently than the original one, which were far longer in healing than the former. Dr. Van Buren's plan is to paralyze the sphincter by over distension; and this plan not only recommends itself by its simplicity and bloodless character, but by its thorough and complete efficiency.

It is the first step in the operation, after the anæsthetic is taken, and is thus effected: Each thumb is to be placed in the rectum, so as to fully command the sphincter. Such fingers as will then reach should be firmly fixed upon the tuber ischii of each side, and by a slow and persistent pressure the thumbs should be closed upon the fin-

gers. This probably will not be effected without some disruption of the muscular fibres, and possibly of the mucous membrane; but if not made too rapidly there is little chance of this. Of course the drawing should be so done as not to make traction on the perineal extremity, and should be repeated till a perfect flaccidity of the sphincter is evident. A surgeon who to-day should divide the sphincter with a scalpel may be considered behind the age—in this direction certainly.

TREATMENT OF THE BOWELS AFTER THE OPERATION.

The change in the treatment of the rectum before the operation, has eventuated in a change in the treatment after the operation. To control the local irritability and alvine evacuations, injections and suppositories of *opium* were persistently used; but when the sphincter was paralyzed, either by its division or by Dr. Van Buren's method, its gaping mouth was not controlled by the opiates, and the contents of the lower bowel were passed insensibly.

When this fact was recognized, the next attempt was to assist nature; and instead of allowing hardened fœces and irritating substances to pass, unduly dilating the passage, to aid, by softening such secretions by attention to diet, by frequent teaspoonfuls of olive oil, by sulphur and molasses, and by avoiding all local narcotic treatment. If, however, the bowels still remain constipated, and it is desirable that they should be evacuated, a bland enema should be administered.

The operation will have little, if any effect, on the general health. If done the day after the confinement, the patient will scarcely be detained in bed a day longer than ordinary; there will be no change in the diet required; and after the lapse of some year or two, scarcely the trace of the injury will be discernible, the scar being then lost in the raphe and the folds of cutaneous integument.

